

Comments on the proposed conservation of *Trichia* Hartmann, 1840 (Mollusca, Gastropoda), and the proposed emendation of spelling of TRICHIINAE Ložek, 1956 (Mollusca) to TRICHIAINAE, so removing the homonymy with TRICHIIDAE Fleming, 1821 (Insecta, Coleoptera)

(Case 2926; see BZN 57: 17–23, 109–110, 166–167)

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I fully support the comment by Prof L.B. Holthuis (BZN 57: 109–110) not to invoke the Commission's plenary power to save the least deserving of the names involved in this case, *Trichia* Hartmann, 1840 and TRICHIINAE Ložek, 1956, used in Mollusca. In addition to the reasons given by Holthuis, with all of which I agree, I object particularly to the request to the Commission 'to rule that the name *Trichia* Hartmann is not rendered invalid by the existence of *Trichia* von Haller, 1768 in Myxomycetes'. This would set a dangerous precedent, as the argument that confusion with an animal name is unlikely could be applied to many, and possibly the vast majority of, ambireginal names. If this homonymy is deemed acceptable, the question may be asked why ambireginal names are included within the scope of zoological nomenclature. Furthermore, acceptance of this argument could lead in the future to its extension to cases of homonymy between animal names if there is a low probability that they may be quoted together in the same context.

If the principle of homonymy is maintained (as it certainly should be), *Trichia* Hartmann, 1840 and *Trichia* de Haan, 1839 become invalid, as well as the family-group names based on these genera. Consequently, use of the plenary power need not be invoked to deal with any aspect of the application. If the Commission followed this route, Gittenberger's work would not have been 'in vain' (see BZN 57: 167) as it was necessary to submit this complex and seemingly controversial case in order to achieve nomenclatural stability, whichever way the ruling may eventually go.

I admit that *Trichia* Hartmann is an often used name for a group of common land snails. However, its use has not been established for very long, as Holthuis has correctly pointed out. The synonymy of *Trichia* Hartmann, *Trochulus* Alten, 1812 and *Erethismus* Gistel, 1848 is well known in the literature (see, for example, Zilch, 1960). In my own records I have used all three names, depending on changing assessments of the nomenclatural situation. The preservation of the principle of homonymy, in addition to priority, should be more important than the convenience of malacologists, who continuously experience other name changes for taxonomic reasons.

The homonymy of the family-group names TRICHIIDAE Fries, 1821 (published as Trichocisti; type genus *Trichia* von Haller, 1768, Myxomycetes) and TRICHIIDAE Fleming, 1821 (type genus *Trichius* Fabricius, 1775, Coleoptera) should be addressed, as Gittenberger et al. (BZN 57: 166–167) have already noted. Both names are in frequent use. I recommend that the Commission rule that the stem of the coleopteran family be TRICHIUS-, giving the family name TRICHIUSIDAE.

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I strongly support the application by Gittenberger (published in BZN 57: 17–23, March 2000), and in particular the conservation of the scarab beetle family name TRICHIIDAE Fleming, 1821 (usually cited as the subfamily TRICHIINAE or tribe TRICHIINI in the family SCARABAEIDAE) by disregarding the slime mould names *Trichia* von Haller, 1768 and TRICHIIDAE Fries, 1821 for the purposes of homonymy in zoological nomenclature.

Ádám (1994, p. 10) attributed the scarab family-group name TRICHIINAE to Gmelin (1790) but, in fact, Fleming (1821) was the first author to use a family-group name derived from the genus *Trichius* Fabricius, 1775. Gmelin (1790, p. 1583) and later Latreille (1802, p. 154) used the plural form of *Trichius*, ‘Trichii’, to unite a subgroup of the genus *Scarabaeus* Linnaeus and of the genus *Cetonia* Fabricius respectively. Under Article 11.7.1.2 of the Code ‘Trichii’ is not an available family-group name.

The family-group names TRICHIIDAE Fleming, 1821 (Coleoptera) and ‘Trichocisti’ Fries, 1821 (Myxomycetes) have been recorded as published in the same year (paras. 9 and 10 of the application). However, Fries was not the original author of the name. He cited Nees von Esenbeck who introduced ‘Trichocisti’ on p. 110 of his *Ueberblick des Systems der Pilze und der Schwämme* in 1816. If the names are treated as homonyms under the zoological Code, TRICHIINAE Fleming, 1821 (Coleoptera) is junior to Trichiaceae (or TRICHIIDAE) Nees von Esenbeck, 1816 (Myxomycetes).

The crucial point in Prof Holthuis’s contribution (BZN 57: 109) is that he would bring slime mould names into homonymy with zoological names. Holthuis, followed by Rosenberg (BZN 57: 225), called the Myxomycetes an ‘ambiregnal group of organisms’. He adopted this term from Corliss (BZN 52: 11–17). Originally Patterson (1986, p. 87) created it in combination with the word taxonomy as a descriptive term for a practical procedure: ‘ambiregnal taxonomy’ treats ‘taxa that fall under the jurisdiction of more than one code of nomenclature’. Then Corliss declared the organisms themselves to be ambiregnal (‘the ambiregnal protists’).

Current phylogenetical analyses of the basal evolution of living organisms clearly show that the slime moulds in the traditional sense are probably polyphyletic and that the taxa formerly subsumed under the slime moulds (see Bresinsky, 1983, pp. 630ff; Lim, 1998, p. 369) do not form part of the Animalia, the Plantae or the Fungi (see Schlegel, 1994; Sogin et al., 1996; Baldauf & Doolittle, 1997; Baldauf, 1999). This distinctness is widely accepted in common text books (see Madigan et al., 1997, p. 778; Lim, 1998, p. 312). However, slime moulds are often still included in a paraphyletic ‘regnum Protista’ or a ‘kingdom Protozoa’ (possibly making it polyphyletic; see Baldauf, 1999) for practical or traditional reasons or because the authors are simply ignorant or agnostic (see Cavalier-Smith, 1998) to the classificatory consequences of phylogenetic evidence.

There is no clear scientific reason for treating the slime moulds as either ‘animals’ or ‘plants’. To minimize nomenclatural confusion and to maximize nomenclatural stability I strongly suggest that research traditions are followed in each case in deciding under which Code or Codes the nomenclature of such a group should fall.

The 'slime moulds' are already explicitly covered by the *International Code of Botanical Nomenclature* (Saint Louis Code) (see Greuter et al., 2000, p. 2).

There is a long argument between zoological and botanical textbook writers as to which domain the slime moulds belong. As a result they are generally included in both although there is some bias for botanical publications. There are zoology textbooks from which the slime moulds are explicitly excluded (see, for example, Grassé et al., 1970, p. 40: 'Nous ne traiterons pas des Mycétozoaires (ou Mycomycètes) qui, en dépit de leurs affinités animales, sont réservés aux Botanistes'), but I have seen no botany textbook from which this group is missing. As Rosenberg has indicated (BZN 57: 225–226), many myxomycete names are included in S.A. Neave's *Nomenclator Zoologicus* and in *Zoological Record*. In this particular case, primary research publications must be consulted to decide how to minimize nomenclatural confusion: has the slime mould genus *Trichia* von Haller, 1768 and family-group name TRICHIIDAE (or Trichiaceae) Nees von Esenbeck, 1816 been claimed by both mycologists and (proto)zoologists as Holthuis stated?

A search of the literature cited by BIOSIS Previews (*Biological Abstracts* 1970 — present) gave the following results: 167 papers using the name *Trichia* were found, 93 of them on the slime mould genus, 71 on the snail genus and three on the crab genus. Of the 93 slime mould papers, 27 were published in botanical journals, 31 in mycological journals, 33 in general journals, one in a microbiological journal, and only one paper has been published in a 'protozoological' journal (Demaree & Kowalski, 1975) although even here the authors used botanical nomenclature (Trichiaceae). None of these papers has been published in a zoological journal. Addresses of 65 of the authors of the 93 papers were given; of these, 35 authors came from botanical departments, one from a medical mycological department, one from a microbiological department, and 28 from general biological departments or from private addresses. No paper emerged from a zoological institution.

There is no doubt that the taxonomy and systematics of the Trichiaceae and slime moulds in general are traditionally studied by mycologists (para. 10 of the application). Mycology has traditionally been, and will be, studied in botany departments, although the fungi no longer belong to the plants (and the slime moulds no longer belong to the fungi). In this particular case, to treat the Trichiaceae under the jurisdiction of the zoological Code would be a novel and confusing experience for all taxonomists working on this group (Blackwell & Powell, 1999, p. 409, for example, noted that 'slime molds ... traditionally viewed as Fungi but now known to be Protozoa ... are still treated nomenclaturally by the botanical Code'). I contend that the nomenclatural changes because of 'homonymy' between myxomycete and zoological names, set out by Rosenberg (BZN 57: 226), were in response to a theoretical, rather than an actual, problem and probably created much greater difficulties.

Thus, the formal assignment of artificially defined groups like 'Protista' to any one of the nomenclatural Codes (Cavalier-Smith, 1998, p. 203) has no scientific basis and no justification by common usage. If the slime moulds are treated as being under the aegis of the zoological Code, traditionally botanical names would interfere with zoological ones causing much confusion and instability, as already noted by Gittenberger (BZN 57: 226). *Trichia* von Haller, 1768 and the family-group name Trichiaceae (or TRICHIIDAE) Nees von Esenbeck, 1816 are not to be considered zoological names.

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Comment on the proposed conservation of *Hydrobia* Hartmann, 1821 (Mollusca, Gastropoda) and *Cyclostoma acutum* Draparnaud, 1805 (currently *Hydrobia acuta*) by the replacement of the lectotype of *H. acuta* with a neotype; proposed designation of *Turbo ventrosus* Montagu, 1803 as the type species of *Ventrosia* Radoman, 1977; and proposed emendation of spelling of HYDROBIINA Mulsant, 1844 (Insecta, Coleoptera) to HYDROBIUSINA, so removing the homonymy with HYDROBIIDAE Troschel, 1857 (Mollusca)

(Case 3087; see BZN **55**: 139–145; **56**: 56–63, 143–148, 187–190, 268–270)

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In addition to my support and previous comments on this application, which were published in BZN **56**: 62–63 (March 1999), I should like to make the following observations.